THE VETERINARY RECORD

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Tuberculosis.

The President of the Local Government Board has declined to receive a deputation from the Smithfield Club desirous of laying before him their views on the subject of compensation for seizure of tuberculous carcases. It will be remembered that about a year ago Mr. Long and Mr. Chaplin received a deputation on this subject, and put them off with some advice about mutual insurance. By *mutual* insurance reasonable men mean co-operation between stock-breeders and butchers, but the stock-owner and his friends the landlords seem to think the whole risk should be born by the butcher. During the past year insurance by buyers has been tried, with the result that a small payment is found to cover the risk so far as young stock are concerned, but when cows are included the loss is so great that no mutual insurance can stand it.

Mr. Long thinks that no new facts concerning tuberculosis have come to light since last March. This is partly true, but much ignorance has been dispelled and many old facts have been appreciated. During the past year many stock-owners have by the use of tuberculin detected disease in their herds and then quietly passed the affected animals over to the butcher.

"This," says *The Meat Trades' Journal* "is a new feature which the Local Government Board and the Board of Agriculture must consider. Has Mr. Long or Mr. Hanbury considered this matter at all? We think not or they would not assume the responsibility of aiding and abetting, or being accessory to a fraud of the most cruel kind. . . . . The two departments concerned have shuttle-cocked the question of tuberculosis between them for a dozen years back, but our traders have had enough of such treatment and will probably, as Mr. Coggan hinted in his remarks at the Council meeting of the Smithfield Club, at no distant date take measures to relieve themselves from the unjust prosecutions and heavy losses to which they have been exposed."

This sounds like business, and we approve every word our contemporary uses. The meat traders should combine with the dairy interests and the veterinary profession in a thorough determined agitation, so that the "legalised robbery" now perpetrated by stock-owners may be abolished. In July next the British Congress on Tuberculosis will be held. Let us commence work at once, and the Congress will afford a culminating point for a united effort which will ensure success.

STOMACH STAGGERS AND CONCUSSION OF THE BRAIN.

Subject.—Black mare, five years old.

History.—The mare had gone about two hundred yards from her stable when she showed inability to progress, staggered from side to side, pitched forward and fell on the base of her skull (occiput), the rider escaping without any injury. She had been in regular work up to this date and never before showed any signs of "stomach staggers."

Symptoms.—I arrived a few hours after she had gone down, and found a considerable amount of blood where her head was laid, the latter flowing copiously from the nostrils. She was in a semi-comatosed state, quite cold all over; on pricking her with a pin along the spinal region no sensation was evinced, the near eyelids and face, on which side she was lying, was very much bruised. Pulse small and weak, respirations markedly increased, the visible mucous membranes rather pale.

Treatment.—Frequent attempts had been made to get her up prior to my coming without avail. Ordered a half dozen men to get buckets full of cold water which I douched at her head and neck, and in about five minutes time she made a good offer to get on her legs, and with the aid of the men at hand we finally got her standing, in which position she frequently swayed from side to side. I then got the men to prop her up on each side and got her about sixty yards to her box when she went down again. I again repeated the cold affusions after which she regained her legs, and we eventually got to the stable, where she lay down stretched out.

Palliative treatment.—I kept relays of men all day applying cold affusions to the head by means of a sponge; the afternoon of the same day she got up of her own accord and burst out of the box, and was finally caught after some trouble.

The next day, and for two weeks following I kept the box darkened, plenty of bedding was also kept under her as she staggered when moving about the box.

Medicinal treatment.—Six drs. dose of physic (aloes), anodyne ointment and dry desiccant powder to the eye, face, and abrasions on the near side of body. When the physic had spent its effect, ʒii. pot. iodid. as a ball was administered daily. This I stopped in a week's time when the staggering had ceased, using in lieu nervine and blood tonics given as balls daily. Her diet was carefully regulated, little and often being given.

In a month's time she was struck off sick list and afterwards was sold as being dangerous to ride.

Henry G. Allen, M.R.C.V.S.

Dublin.

STOMACH STAGGERS "PECULIAR SYMPTOMS."

By Vet.-Major D. C. Pallin, A.V.D.

Shortly before proceeding to the South African war I was summoned one morning early to attend a case in barracks.

The orderly who came for me stated that a mare, which a few days previously suffered from colic, was again bad but apparently much worse on this occaion, adding that she had during the night managed to eat nearly all her bedding.

I found my patient in one of the infirmary boxes, to which place she had been, with great difficulty, removed from the troop stable. She stood in its corner, the legs being straddled, the head hanging pendulous, with the lips resting on the newly laid down straw bed. The eyelids swollen and congested, portion of the tongue protruded out of the mouth from which there was a copious discharge of frothy saliva, giving the animal the appearance of a dog suffering from dumb rabies. The body was covered with sweat, while the extremities were icy cold, tail being kept in an erect position with obvious tympanitis.

The temperature was 102, respiration 36, laboured and performed with a jerk; pulse 58 and full, with the exception of each sixth, and sometimes the seventh beat which was entirely absent. There was extreme stiffness and inability to move, particularly the hind quarters. The rectum contained a large quantity of healthy fæces, which was removed without delay and an enema immediately given; an attempt to raise the head seemed to cause intense pain and patient to fall on her knees. Great difficulty was experienced in opening the mouth for examination, and on the animal's muzzle being placed in half a bucket of tepid water all power of prehension and deglutition appeared completely lost. Thus the administration of a drench, without casting, seemed an impossibility. The patient presented a drunken appearance, but stood perfectly quiet.

What had I to deal with? A case of stomach staggers, impaction, serious injury through violent struggling during the night, internal rupture, tympanitis, a clot causing pressure on some nervous centre, kidney trouble, effects of poisoning, tetanus, aye, even quinsey or dumb rabies—rare equine maladies.

The symptoms exhibited pointed more or less to each and all of these diseases, but alas my patient could not speak or enlighten me, and I was for a time at a loss to form a true and correct diagnosis of the case. I am by no means a young or inexperienced practitioner, still I must confess feeling on this occasion like many a good cricketer "stumped." Something, however, had to be done, and what treatment was I to adopt? Backraking and enemata came first, which were already carried out. I then thought of bleeding, but on examination of the pulse I decided not to do so, making up my mind to give an aloetic purgative I had a fresh soft ball made up and wrapped in a small amount of thinest tissue paper. While this was being done the animal's body was well wiped, a rug applied, together with flannel bandages to the legs. I then placed two men on each side of the neck so as to prevent patient falling on me during my attempt to administer the aperient. Going down on my knees in the straw I raised the head a little and with some difficulty sufficiently opened the mouth so as to allow me, with a quick effort to lodge the ball in the pharynx. My escape from being crushed was most marvellous, as the slight elevation of the head caused the animal to pitch forward and fall. On being released she was quickly on her legs gaining the original position. I hastily had a tighter strap placed round the muzzle, and watched for just five minutes, when to my delight the ball passed down the trachea.

During the subsequent four hours no noticeable change took place, and the treatment pursued consisted of repeated enemas.

Two hours later, however, a marked improvement became apparent; respirations were easier, sweating almost ceased, head did not hang quite so pendulous, extremities warmed up, and both fæces and urine were voided.

Later in the evening, with a view of hastening the action of the physic I decided to give a good stimulant, but its attempt at administration gave rise to frantic paroxysms and I consequently left patient alone.

The following morning she was found standing in the exact position she had been left late on the previous night, and on paying my morning visit I was agreeably surprised to find the great improvement which had taken place. Respirations had become almost normal; temperature 100; pulse 48 and regular with the exception of each sixth and sometimes the 7th beat, already referred to, not being quite so full in volume as the other pulsations; stiffness and inability to move still existed, but not to such an extent as on the previous day. A little chilled water was slowly swallowed and some warm bran mashes taken out of the hand. About noon I ordered exercise, which seemed to cause further improvement, and I was then able to administer a stimulant.

Between three and four p.m. the physic commenced to act, a liquid motion taking place, and from that moment gradual recovery was made.

On the fifth day subsequent to admission patient was discharged "cured" for duty, and continued well up to the time I left the station.

The case was no doubt one of impaction giving rise to stomach staggers, accompanied by aggravated symptoms which happily yielded to simple treatment.

A Venerable Sheep.

A correspondent writes to a local paper (Berkshire) stating that Mr. R. Bennett, of Chaddleworth, has a ewe twenty-one years old. The ewe has had twenty-one lambs. "For years she has been toothless, her food being cut up by the kindly shepherd, who, I am sure, must take a great pride in her."

REMARKS ON THE PRESENT TYPE OF INFLUENZA.

By E. Wallis Hoare, F.R.C.V.S., Cork.

In this city, influenza among horses has been prevalent for some time to a greater or less degree. At present there are a large number of cases the leading features being high temperatures, and a tendency to pleurisy and pneumonia if the patients are not attended to immediately and kept from work. In one stable of 25 horses; pink eye broke out last autumn, and the same horses a short time ago were attacked by the present form of influenza.

It is rather remarkable the apparent immunity that some horses exhibit to this affection, as in some stables one horse only may have been attacked, while the remainder have escaped the disease. As a rule, however, it tends to spread, and often in spite of all precautions it will go through the animals in a stable. One case, complicated with pleurisy and pneumonia, was progressing favourably, when the patient, a six-year-old van-mare suddenly went down and exhibited symptoms of cerebro spinal complications, became completely paralysed, and had to be destroyed.

The mortality is very low if the affection is treated in time. Good nursing and hygienic surroundings (if such can be obtained) are the most important attributes to treatment. So long as the patient feeds sufficiently to keep up his strength, no drenching is necessary. Simple salines in the drinking water and an unlimited allowance of the latter being all that is required in the medicinal line. If the temperature be very high a few full doses of quinine may be given at first with advantage, but experience in a large number of cases in which this drug would have proved an expensive luxury, go to prove that the temperature gradually falls and the animals recover with simple treeatment and careful nursing. If pulmonary complications are present, we must use discretion in prescribing stimulants. The annoyance to the patient, and the risk from frequent administration of drenches must be borne in mind.

But if the animal absolutely refuses to feed, if the temperature be high, and if the character of the pulse be weak, then we must adopt measures to assist nature in maintaining the strength of the patient. Experience, tact, and common sense will dictate to us the rational manner to carry out treatment; we must avoid hard and fast rules, and have our minds untrammelled by prejudice or fads. Medicated inhalations properly administered give beneficial results, especially if bronchitis be present, but even in pneumonia they appear to give relief. After a long experience with pure terebene, we prefer it to any other agent for the medication of steam; the use of a bag over the horse's head should never be allowed, as a sufficient inhalation can be obtained without it; about two wineglassfuls of terebene in three-quarters of a bucket of very hot water, with hay on the surface, and the receptacle held close to the patient's nostrils will do all that is necessary, most horsses will submit to the procedure without any trouble.

FURTHER REMARKS ON THE USE OF THE THE THERMO-CAUTERY.

In *The Veterinary Record* of last week Mr. H. Leeney in his remarks on the above subject enquires if I have been employing the thermo-cautery for a long or short period. I have pleasure in stating that I am now using it for over four years, that I have no difficulty in working it, and that it never goes out of order if it is managed in a proper manner. Of course it is safer to take two points in the case, if going out of town, as instruments of this nature will occasionally "suck" when least expected. It is in the country that this instrument gives its real charms, as farmers and "yokels" regard what they call the "electric" firing machine with the greatest favour combined with a certain degree of awe. It must prove beneficial in its results if I am to judge by the frequency that it is in use, and how it is asked for in preference to the ordinary firing iron; while the initial outlay proves a valuable investment.

Ibid.

EVERSION OF WOMB.

Subject.—Red shorthorn cow.

History.—Was carrying fourth calf and was six months gone, when on the morning of December 21, 1900, she aborted. At 5 p.m. same day she was fed as usual, and then seemed all right, shortly after 6 p.m. on owner going into byre he found her pressing heavily, the womb out and bleeding slightly, part of the cleansings still adherent. At 10 p.m. I was sent for and on arrival at the farm found her as described. Pulse 65, temp. 103, respirations accelerated. The womb a good deal swollen and discoloured.

Treatment.—After removing the cleansings, which was an easy matter and more interesting than when you have to do it as in the ordinary cases, in the dark as it were. After doing this I washed the womb with warm water and sol. of potass permang. Chloral hydrate ʒiss., divided into two doses, had been given in the meantime as a drench, and also some oatmeal gruel.

Placing the womb on a towel which was held by an assistant at either end, with a corner in each hand, I applied two bucketfuls of cold water on the organ and with gentle manipulation succeeded in returning the organ, which was kept in position by an assistant until I got a truss applied. As she still "pressed" a little I introduced my hand into the womb and pushed it as far forward as I could into position, then smeared the mucous membrane with an emollient application and after this the tenesmus ceased for some time. Ordered soft easily digested food and left some sedative powders. Again saw my patient eight hours after and found she had been progressing fairly well and not much straining except at defecation and urination, and then only for a short period. Three days after, the temperature rose to 104, pulse increased in frequency, and also respirations. Febrifuges were given, and on the 7th

day the fever had abated. About this time a dirty white discharge issued from the womb which gradually changed to a brown coloured discharge mixed with blood, and on December 30th she was discharged cured.

The interesting point to my mind, as far as my experience goes, is the fact of the womb coming down *after abortion at the sixth month.* I have had them down at the full period after calving, but never as in this case at the 6th month.

Perhaps some of the readers of *The Veterinary Record* have met with a similar case. The truss was allowed to remain on for a fortnight.

W. T. Bolton, M.R.C.V.S.

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FRACTURE OF THE ANTERIOR BORDER OF THE FRONTAL ARCH.

A brougham horse had got cast in the stall, and whilst struggling to regain its feet had considerably knocked and bruised itself. On making an examination next morning several superficial wounds were present more or less over the whole extent of the body, being of the nature of contusions without perforation of the skin and not serious, with the exception of the right eye, which had evidently come into violent contact with some blunt object and was completely closed, except for a space of just about a quarter of an inch, through which the horse could just see, revealed by the opening and shutting of the winking bodies—the lids—when the hand was waved backwards and forwards in front of the range of vision. The superior eyelid was in a considerably œdematous condition, very much swollen, pitted on slight pressure, and was extremely painful to the touch. The skin showed no trace of any external wound and only presented a very shiny, glossy appearance, due to the underlying pressure of the serous effusion. A copious discharge of tears flowed over the face, intermingled with a slight amount of suppurative material. The skin overlapping the temporal fossa was bulged outwards, the important organs contained within the cavity of the orbital fossa being pressed upon had receded, the globe of the eye forcing its cushion of adipose tissue, which retains it in its proper position and assists in steadying its movements, in a backward and upward direction. The left eye was uninjured. Owing to the swollen and enlarged appearance of the orbit and to the difficulty encountered on manipulating the part, the patient's head becoming very restless as soon as slight manual pressure was brought to bear upon the injured region, a diagnosis of any certainty could not be arrived at, although fracture of the external orbital process, as shown by the condition of the parts to visual inspection, was suspected. In the meantime, in order to reduce swelling and cause an absorption of the œdematous fluid concurrent with the removal of pain, suitable applications were employed to bring about this end. And so, when the acute pain had subsided and a very considerable reduction of the swelling had taken place, manipulation of the parts was rendered much easier and little pain was evinced by the patient. It may be observed here that about this time, from the inner canthus of the eye, the discharge, formerly of a thin clear nature, had now become distinctly purulent, thicker in consistency and more profuse, the cause of which was no doubt due to puncture, with slight laceration of the conjunctival surface of the upper lid, by a small fragment of fractured bone and so permitting of the invasion of microbic life. A good guide to diagnosis of the lesion now manifested itself. Standing in front of the horse a comparison of both sides of the head revealed an appreciable difference over the region of the frontal arches ; that of the injured one presenting a slightly sunken flattened appearance, whereas the contour of its fellow preserved in comparison a well marked arched outline. The eye still remained nearly closed, but with vision not entirely obliterated ; prognosis was favourable.

Proceeding to locate the extent of the fracture, pressure upon the anterior part of the external orbital process made manifest the evidence of crepitation, intermittently so, and not well established ; furthermore, a sinking sensation was transmitted to the fingers giving rise to the opinion that a piece or pieces of bone were detached from this arch of osseous tissue, the posterior part of which, although it appeared perceptibly sunken, did not recede to even increased pressure. Without at first attempting to remove these, what were considered to be detached pieces of bone, an attempt was made to rectify the displacement of the main bony structure by means of an elevator. Accordingly a small lever was employed, and acting on the directions laid down in Williams' Surgery, after some little difficulty in getting the end of the lever directly under the "bend" of the fracture, the arch was considerably raised, not exactly to its former position but nearly so ; however, the anterior border still remained depressed although temporarily raised. In order to bring about the removal of those fragments which were pressing upon the globe of the eye and moreover acting as foreign bodies, causing irritation and increased formation of the purulent discharge and so preventing progress towards recovery, an incision was made, after previously inducing anæsthesia by diminishing the sensibility of the peripheral nerve structures by means of two or three injections of a 25 per cent. solution cocaine hydrochl. through the cutaneous covering over the region of the orbital process, extending from a point, as well as could be judged, fully half an inch on the antero-external side of the supra-orbital foramen, longtitudinally across the frontal arch for a distance of from two to two and a half inches, keeping the incision towards the external side of the middle line. On getting down to the bony surface, after dissecting the underlying tissues from the periosteal covering, exploration with the point of the finger revealed the actual presence of fracture, and to bring the entire extent of this solution of continuity of bone into evidence, from either end of the incision, other minor incisions were made transversely, leading towards the entrance to the orbit, about half an inch in length. After this was done the skin was dissected from the loosened osseous tissue and folded back. The region of the fragments of bone was now made quite exposed to view, being bent inwards, causing

pressure upon the organs contained within the orbit and when grasped with the forceps found to be, although loosened, firmly adherent to the underlying fibrous membrane—the ocular sheath. Fortunately the fracture did not extend to that part of the bone wherein is located the supra-orbital foramen, and so the structures which find a passage through this opening—the supra-orbital division of the ophthalmic nerve (branch of 5th) the artery and its satellite vein—were not implicated in the lesion. The fragments consisted of two parts, each piece in length nearly three-quarters of an inch, and in breadth half an inch, detached from the process and separated from each other by a well marked line of demarcation, simulative of the appearance of a normal skull suture ; the rest of the bony arch, as far as could be seen, showing a normal surface. Applying the cocaine over as wide an area of exposed tissue as could be reached, I proceeded, after a short interval of time until the effect of the anæsthetic began to exert itself, to remove the fragments with a pair of forceps, small straight bistoury, and a slightly curved instrument with flattened blunted end, which could be made to pass under the bone and so materially assist in removing them from their underlying attachments. Great care and cautiousness was employed in order to prevent injury to the bulbus, and after some little difficulty their removal was successfully accomplished. All the smaller particles were carefully extracted, the edges of the bone denuded of all projecting ridges, and the wound bathed with a very weak solution of hydrochloric acid in order to dissolve the earthy matters of any necrosed portion of the surface of the bone and so facilitate the formation of a healthy healing surface. The edges of the wound made by the incision were now brought into immediate contact and kept in apposition by means of sutures, the central one being more deeply imbedded than the others, sufficient space being left at either extremity to permit of antiseptic irrigation. A few days after the operation the discharge began to cease, the space through which vision was permitted gradually becoming wider, and the wound over the superior eyelid making satisfactory progress towards ultimate recovery, until finally a small cicatrix was developing to remain as the only sign of surgical interference.

The patient could by this time see through very nearly half the space through which the globe of the eye can normally be seen when the eyelids are apart. Only a thin watery-looking fluid now continued to flow from the inner canthus, chiefly consisting of an increased secretion of tears, and which could be kept in check by means of astringent collyrial applications. The progress of the case was now pointing to such a satisfactory termination, and as any further interference of a medical or surgical nature in the meantime was considered uncalled for, it was determined, in order to allow the tissues of the superior eyelid to sufficiently contract and as a natural sequence permit of a better exposure of the globe to view, that the season being suitable the patient should be allowed a "run at grass," the injured eye being periodically examined and then receiving such attention as was desired and necessary. After a period of time, bordering on the lapse of nearly two months, the horse was brought back to town and shortly afterwards resumed its usual work, very little trace of the late injury being manifest beyond the fact of the presence of the cicatrix over the upper eyelid and which was not too perceptible, and the appearance of a slight depression over the same region consequent on the extraction of a portion of the framework of the frontal arch.

Since the recovery from the accident I have constantly seen this horse at work and detected nothing of importance which might cause it any inconvenience whatever, with but this slight exception that a more or less constant flow of tears escapes from the nasal angle of the eye and passes over the face, and which is probably due to an abnormal secretion from the lachrymal gland, which no doubt has to some extent been implicated in the lesion with the consequent result that an overflow takes place within the lachrymal sac through the inability of its duct to convey this superabundant fluid into the internal chamber.

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ABSTRACTS FROM FOREIGN JOURNALS.

Horse Sickness in South Africa.—Communicated by M. Nocard to Central Veterinary Medical Society, Paris, Jan. 10th, 1901.

Gentlemen, I wish to invite your attention for a few minutes to a serious equine disease which appears to be unknown in Europe, but which has caused great loss in South Africa. All the newspapers have mentioned "Horse Sickness" which at the commencement of the war in the Transvaal decimated the English Cavalry, and which reappears in the heat of the summer of the Southern hemisphere.

"Horse sickness" is not merely a matter of importance for the moment, but it is also a subject of great scientific interest. It is severe only in the summer, when it attacks many newly imported horses and the majority of those so attacked succumb, so much so that out of ten cases it is with difficulty that one or two are saved. Those that recover are what are termed by the Boers *salted*, and have an increased value as they are henceforth protected against the disease.

"Horse sickness" specially attacks equines, and although it is almost always fatal in the horse it is seldom so in the ass, and in the mule about half those attacked recover. Other animals appear to be refractory to natural infection, but Dr. Edington states that he has been able to artificially induce the disease in the goat, sheep, and ox, and although he has never been able to kill the two former a few of the latter have succumbed, presenting lesions the same as observed in the horse.

The first indications of "horse sickness" do not appear for eight or nine days after infection, and consist invariably of progressive hyperthermia with a great fall at night. The general state of health does not undergo any alteration, and the rise of temperature usually is unnoticed.

When the first indications that the horse is ill are

usually noticed the end is very near and death takes place most rapidly. For a short time before there is great difficulty in respiration, great prostration, and a discharge of froth from the nostrils of a white or pink colour, the consistency of chipped white of egg, and the animal falls down dead.

This acute form of the disease is known as dunpaardziekte by the Boers, and although it appears to manifest itself very suddenly, in reality there is a rise in the temperature three or four days previous.

In the other form dikkopziekte, or big head, previous to death there is œdematous swelling varying in extent of the head, sometimes extending into the neck. The respiratory derangement and discharge of froth do not appear until 24 or 48 hours previous to death, and sometimes, but rarely, are altogether absent, in which case the animal may recover.

On post-mortem examination the pericardium is found to be filled with a clear serum of a pink or a yellow colour. The cellular tissue of the lungs is infiltrated in a like manner, and sometimes the quantity of serum is so great that it separates the pleura from the lung, and by separating the pulmonary lobules from one another gives the appearance of bovine contagious pleura pneumonia. The connective tissue of the head and neck is also infiltrated with the same sort of serum which is sometimes present in enormous quantities. All over the body the capillaries are engorged with blood, black, turbid and diffluent.

"Horse sickness" can be readily reproduced by inoculation, but it does not appear to be contagious in the strict sense of the word.

MM. Danysz and Bordet who studied the disease in South Africa in 1897, when they were employed in that country during the great rinderpest epidemic, are very positive on this point. On several occasions they have reproduced "horse sickness" in the winter by inoculation without its affecting any other *unsalted* animals that have been in contact with the diseased.

Dr. Edington who has been working at "horse sickness" for the last seven years has never seen the disease propagate itself to the neighbours of the animal that has been inoculated. I have observed the same fact with the animals on which I have experimented.

I have just stated that a large number of imported horses are attacked, and that many succumb. There is, however, a simple means of protection which is to bring them into a well closed stable before sunset and not allow them out till sometime after sunrise. This simple measure, however, is not practicable with an army on the field.

This fact, which is well established, appears to point to some connection between "horse sickness" in equines and paludism (malaria) in man. It is now well known that the anopheles (a variety of mosquito) are the active agents in the propagation of malaria, and that it is produced by their bites. In places where there are no mosquitos there is no malaria, no matter how unfavourable the telluric conditions of the country may be. Furthermore, even in those places in which there are mosquitos malaria can be avoided if means are taken to prevent them biting.

This fact was first noted by Laveran, who first discovered the parasite of malaria, and it has been proved experimentally by Patrick Manson and Grassi. Manson's son, who had never been exposed to malaria, showed well marked symptoms of a severe type a few days after being bitten by mosquitos caught in a malarious district in Italy and sent to London. On the 3rd day Laveran's parasite was discovered in his blood.

Professor Grassi has shown that it is possible to live with impunity in an unhealthy district if care be taken to avoid being bitten by mosquitoes. He mentions that the workmen employed on a line of railway being constructed across the Roman Campagna "a notoriously unhealthy district" were enabled to continue working during the summer without any risk of malaria by taking the precaution of remaining during the evening in their huts, which were well closed, and had all the openings fitted with wire gauze of a sufficiently small mesh to prevent mosquitos entering. The men did not begin to work till well after sunrise, and if they had to go out during the night they protected the head and face with a mosquito net, and the hands and wrists with thick gloves that fitted close over the sleeves of the coat.

It appears possible that "horse sickness" may be caused, like malaria, by the bite of some nocturnal insect, but what insect is as unknown as what is the actual virulent agent of the disease. All that we can say is that the blood from affected animals is virulent, and that inoculation with even a small quantity of such blood will reproduce an attack of illness that is generally fatal, with symptoms and lesions the same as those seen when it is acquired naturally.

The following experiment was made on a horse which I inoculated in the neck on Feb. 19th, 1898, with five minims of blood collected in the Transvaal in September, 1897, by MM. Danysz and Bordet.

Up till March 3rd there was nothing to be observed in the general condition of the animal; he had a good appetite and was in good spirits.

On February 27th the temperature gradually rose from 37·5 to 39·9° at which it remained for four days to suddenly fall below normal the day before death.

On the morning of March 4th the animal was dull and took little notice of his surroundings, standing with the head hung down resting the chin on the manger. He refused the evening's food. The eyelids were swollen, partly hiding the eye-ball which appeared to be somewhat more prominent than natural. The head was much swollen especially about the lips, nostrils, and chin. The swelling was soft, somewhat warm and tender. The orbital cellulo adipose tissue was infiltrated and filled up the supra-orbital fossa, forming a soft fluctuating tumour the size of a Tangerine orange. A frothy saliva hung in long threads from the commissures of the lips. The buccal and pituitary mucous membranes were deeply congested, of a dark red colour, but there were no petechiæ apparent. The conjunctivæ were of a brick-red colour, the capillaries engorged with

blood and spread out in a well marked network; the respirations quickened and laboured; pulse soft and irregularly intermittent.

In the evening all these symptoms were accentuated, with absolute prostration. The temperature which the day before had been 39·9° fell gradually to 38·5° in the morning; 37·4° at 2, and 36·7° at 6.30 p.m. The animal died during the night.

Post-mortem, March 5th, nine hours after death. The nasal cavities were filled with white froth which was exuded out of the nostrils; the subcutaneous cellular tissue presented a curious aspect of a uniform violet on which the capillaries distended with black blood were spread out in a network, interposed here and there with petechiæ, and in places large ecchymosed patches. On the chest, neck, and especially the head, the meshes of the connective tissue were distended with a yellow-coloured, limpid, or gelatinous albuminous serum. The whole of the fat was of a yellowish-grey, and the muscles a salmon red colour; they were friable as if they had been boiled. The peritoneum was the seat of intense congestion, especially well marked in the omentum, with petechiæ and ecchymosis more particularly under the visceral reflection. Intense hæmorrhagic congestion of the intestinal mucous membrane; hypertrophy of the spleen which was soft and pitted on pressure; liver engorged with blood; kidneys congested, friable and hæmorrhagic in the cortical portion; the malpighian bodies were thickened, double their natural size; the capsule of the kidney could be detached with the slightest effort; the lymphatic glands were hypertrophied, soft, and infiltrated with a pink-coloured serum; bladder empty, mucous membrane covered with petechiæ and large ecchymosis. On opening the thorax a small quantity of pink-coloured serum was seen, the mediastinum, like the omentum, being engorged with blood and covered with ecchymosis. Both costal and pulmonary pleura were covered with a thick layer of lemon-coloured serum. The pulmonary parenchyma was engorged with blood with extensive infiltration into the tissue of serum. The mucous membranes of the bronchii, trachea, larynx and pharynx after the froth that covered them had been removed were seen to be thickened, engorged with blood, and studded over with petechiæ and patches of ecchymosis. The pericardium contained more than a litre of reddish yellow serum, and was thickly studded with petechiæ. There was a large sub-serous patch of ecchymosis over the coronary fissure. The endocardium of the left ventricle presented the same appearance only more marked. The marrow in every instance had been subject to capillary hæmorrhage by reason of which it was turned into a soft black clot.

The blood in "horse sickness" therefore is virulent, and will retain its virulency for five months, at which time it is still capable of producing the disease identical in every respect to that acquired naturally. The period of five months is not the limit of time that it will remain virulent as the following experiment will show.

A horse was inoculated on June 21st, 1900, with blood collected from the previous case on March 1st, 1898, viz., two years and four months old. The blood had been defibrinated and sealed up in pipettes. It had been kept in the laboratory, protected from the light but had been subjected to great variation of temperature, for it will be remembered that the summers of 1898-1899 had been very hot; nevertheless this blood had retained all its virulence, and the subject died within 15 days. The temperature and the symptoms were the same as in No. I.

The temperature began to rise on June 28th when it gradually went up to 40·9°; it suddenly fell below normal at the end, death taking place on the night of July 4th and 5th.

It was only on the night of July 2nd that any departure from the normal was noticed, viz., loss of appetite, depression, dullness, and insensibility to surroundings.

On July 3rd œdema of the face, supra-orbital fossa, eyelids, and parotid region were noticed.

On July 4th all these symptoms were increased, the animal remained lying down on his bed with the head thrown backwards. The respirations were laboured and accelerated, and the pulse feeble and intermittent. The animal died during the night.

Post-mortem. The capillaries of the whole of the subcutaneous tissue were engorged with blood. The whole of that of the head and neck were infiltrated with serum. There was a small quantity in the abdominal cavity, the peritoneum being intensely congested with petechiæ and ecchymosis present. The kidneys were soft, friable, and hæmorrhagic, and the capsule was easily detached. The liver, spleen, and muscles were friable and engorged with blood. There was no fluid in the thorax. The lungs were enlarged, heavy, and engorged with serum, but floated when placed in water. The pericardium contained about a litre of yellow serum. The heart showed signs of sub-serous œdema with confluent patches of ecchymosis in the region of the coronary fissure. The ventricular endocardium throughout was almost black. The urine collected the evening before death contained about 0·96 per litre of albumen.

The blood therefore retains its virulency for a long time, in fact we may say indefinitely. The pericardial serum and the exudation from the mucous membrane of the bronchii and cellular tissue are also virulent, but according to Edington in a lesser degree than the blood.

All efforts to discover the agent of this intense and durable virulence have up to the present been unsuccessful. The two cases mentioned were the subjects of careful observations, but without any result. The blood at various stages of the attack was carefully examined both fresh and stained in many ways, but no alteration in its morphological elements was ever noticed, neither could any microbe or parasite ever be detected even with the highest powers. Furthermore all my culture experiments have been failures although I have had recourse to every known method. The microbe is no doubt so small as to be invisible even under the highest powers, and the following experiment appears to show that like those of foot-and-mouth disease and pleuro-pneumonia it will pass through a porcelaine filter.

On July 10th, 1900, I passed a 3 per cent. solution of fluid taken from the pericardium of Case II

through a Berkefeld filter. The water was taken from the Seine and was unsterilised and unfiltered and full of organisms.

Tubes of peptonised bouillon were inoculated with the filtrate with negative results, proving that the organisms in the Seine water had not passed the filter. On the same day I injected two animals: a pony and a mare, with 40 c.c. of the filtrate, which would represent a little more than 1 c.c. of the dilute serum. The temperature charts show that the results were the same as with Nos. I and II. The temperature commenced to rise to about 40° c. eight days after the inoculation, and in both animals the usual symptoms set in.

The pony died on the night of July 21st-2nd, but the mare ultimately recovered after having lost nearly 50 kilograms in weight.

On August 20th, when for some time she appeared to be in perfect health, 5 c.c. of blood from the pony was injected subcutaneously. The temperature chart shows that she did not suffer the slightest inconvenience from even such a large dose.

A 5th horse was at the same time inoculated with ¼ c.c. of the same blood; he died on Sept. 1st with the usual symptoms.

I have also experimented with Chamberland filters. A horse, No. V, received 40 c.c. of the same material that had been passed through an F bougie, and was not in the slightest degree affected. He was again inoculated on August 20th at the same time as the mare No. IV with 5 minims of blood from the pony No. III, and as I have said he rapidly succumbed.

It is well known that the microbe of foot-and-mouth disease will pass through not only Berkfeld, but Chamberland and Kitasato's filters. That of pleuro-pneumonia will pass through a Berkfeld and Chamberland F bougie, but not a B bougie or Kitasato filter. The organism of "horse sickness" will pass through the Berkfeld filter but no other. It is therefore reasonable to conclude that it must be larger or more adhesive than those of foot-and-mouth disease or pleuro-pneumonia.

Up to the present all attempts at treating "horse-sickness" have been failures, but recently Dr. Edington has published some facts that lead us to hope that a solution of the problem may be arrived at, although at present they are only laboratory experiments and have not arrived at the stage of commercial utility.—(From *Recueil de Médecine Vétérinaire*, Jan. 30th, 1901.)

JOSHUA A. NUNN, Vet.-Lt.-Col., A.V.D.

ON RINGWORM INFECTION IN MAN AND ANIMALS.

By J. L. BUNCH, D.Sc., M.D., Research Scholar of the British Medical Association.

[From the Pathological Laboratory, University College].

Since the researches of Gruby on the subject of ringworm. communicated first to the Académie des Sciences in the years 1841 to 1845, the subject has been investigated by numerous observers both in England and abroad, and our knowledge of the subject, both clinically and pathologically, has advanced very considerably. This advance is to a great extent due to the brilliant researches of Sabouraud, who since the year 1892 has contributed several valuable papers on the subject. It is now generally held that ringworm in human beings is usually due to two classes of fungus, the "microsporon" and the "trichophyton, which may be distinguished to a certain extent clinically and microscopically, but still better culturally. A less common form of ringworm is due to a fungus which culturally gives a faviform growth, but the lesions of which do not resemble favus, but are either circinate or a well-marked kerion. The trichophyton class includes two forms: the ectothrix, both large and small-spored, and the less common (in England) endothrix, while microscopically an intermediate variety can be distinguished, in which the fungus lies both within and without the hair. The question of etiology of these different forms has always been one of extreme difficulty, for the patients are in most cases children, who, either at school or at play, may very easily have associated with other children suffering from ringworm; and, seeing how very numerous the cases of ringworm in London are, the exact source of contagion becomes almost impossible to trace. In the case of adults affected with trichophytosis, the source of infection may sometimes be determinable with considerable exactitude, and of course in children, also, this is sometimes possible.

During the past three years in the skin department of the Middlesex Hospital by the kindness of Dr. Pringle, and more recently at the German Hospital, I have been enabled to investigate the question of the etiology of a large number of ringworm cases, and it is with the question of ringworm infection from animals that I now wish to deal. Even to veterinary surgeons the determination of the diagnosis of ringworm in animals seems to present difficulties, and I have more than once found that cases thus certified were in reality cases of scabies or pediculosis. After careful search, however, I have been fortunate enough to meet with a few cases of ringworm in human beings and also in animals with which they had respectively been thrown into intimate contact, to isolate and grow the fungus on culture media both from the human being and from the animal, and to demonstrate the similarity between the cultures from the two sources. Cases of ringworm have from time to time been described as having an animal origin, but the source of contagion has only rarely been ascertained, and, indeed, in some of these cases the probability of the patients having contracted the disease from animals appears problematical.

Inasmuch as ringworm cultures obtained from man can be inoculated into animals, and will in them give rise to characteristic lesions in which the fungus can again be demonstrated and re-inoculated, it might, I suppose, be argued that in these cases there is a possibility of the horse or dog having contracted the disease from the human being instead of *vice versa*, but this possibility can be practically eliminated by comparing the dates at which the first symptoms were noticed in the two cases.

The first case was that of a girl, aged 3 ,in whom had been noticed a week previously a small ringed patch on the right forearm, just above the wrist, and a few days later a second patch on the right shoulder. When seen, the first-mentioned lesion was circinate, measuring 1 inch in diameter, with a slightly scaly surface and a red raised edge, which in places showed some minute vesicles containing clear serum, and the redness extended somewhat beyond the vesicular border, fading off gradually into the surrounding skin. The lesion on the shoulder was also circinate, but smaller: the surface was dry and somewhat scaly, and there was no vesiculation. Microscopic examination showed chains of large squarish spores both inside and outside the hairs, and in preparations treated with 6·8 per cent. liquor potassæ a coarse segmented mycelium was seen in the intrafollicular portion

of the hair shaft, terminating in a fringe above the bulb, and also outside the hair in the root sheath and in the connective tissue of the follicle. Scrapings from the lesions showed also chains of spores crossing between the epithelial cells, and a more abundant fine branching mycelium, segmented at somewhat longer intervals, and showing in potash preparations as bright glistening threads, which were, however, less highly refractile than the square-shaped spores. In places, this mycelium gave off short laterol offshoots, which swelled out at the extremity into small oval bodies; and from these, again, there occasionally sprang a still finer and apparently quite recently developed mycelial thread. Similar mycelial appearances I have also observed in ectothrix preparations from other cases, and also in microscoporon cases.

Cultures from minute portions of the affected hairs and from the scales, grown on French proof agar, the materials for which were obtained from Paris, so that the cultures might be accurately compared with those of Sabouraud, showed a network of coarse aërial hyphæ, radiating from the centre, white in colour, and terminating at the edge in tapering, somewhat pointed, processes.

I learnt that the child's father was a coachman, and that there was a horse in his stable which had been certified by a veterinary surgeon to have ringworm, and that the child had been brought into contact with the horse. On paying a visit to the stable I found that there wese two patches on the horse, one on the neck and one on the head, both scaly, and covered with broken and twisted hairs but showing no sign of vesiculation. Microscopic examination of these hairs showed chains of large spores outside the hairs, just as in the child, and cultures on the same medium proved to be almost identical with those obtained from the child's scalp.

The second case is also one in which infection was derived from a horse, but the species of fungus was here quite different. The patient was an ostler, aged 19, with a circular scaly patch, about an inch in diameter, on the right side of his neck. This patch was said to have been present a week, and it began as a small spot. which spread gradually at the edges while clearing in the centre. When seen the edge was red and somewhat raised, with a few small scattered papules here and there. Examination of scales from the lesion showed a network of abundant, fine, branching mycelium, irregularly septate. Fine lanugo hairs showed numerous round or oval small spores, and on careful focussing mycelial threads could be made out running chiefly in the direction of the long axis of the hair. The microscopic appearances, therefore, did not point to any species of trichophyton, but I was loth to make a diagnosis of microsporon until cultures had been made. These, however, left no room for doubt. The fungus grew with extreme rapidity, appearing first as a white downy growth, which rapidly spread over the surface of the medium. This culture closely resembles one of microsporon obtained directly from a horse by Bodin.

On enquiry, I found that the ostler had been looking after a young horse with some "pimples" on its nose, and on going to the mews I found that the animal had some indistinctly ringed vesicles above the right nostril, and the hairs around appeared to be irregular and broken. Microscopically they showed a sheath of small spores outside the hair, and the hair itself contained fine mycelium. Cultures gave a rapidly-growing white mass similar to that obtained from the lesion of the patient. Microscopic examination of the aërial hyphæ from the cultures showed an unusual appearance, inasmuch as the organs of reproduction proved to be lateral bud-like growths, from 2 to 3 u in maximum length, situated directly in the mycelial threads.

The third case was that of a boy, aged 3, with kerion of the scalp. There was a patch, about ¾ in. in diameter, on the left parietal region, crusted with yellowish scabs, which had been present for a fortnight. The hairs were broken, and could be very easily removed. They mostly came away without the bulb, add the hair shaft showed a typical felting with a mosaic of small spores, while inside the hair was mycelium, terminating in a fringe above the region of the bulb. Cultures showed alternate concentric rings of white and brown growth, with a delicate filiform border and a central raised prominence. Hairs from a terrier with which the child had often played proved to be infiltrated with typical microsporon, and cultures from these hairs resembled closely those obtained from the child's scalp.

A fourth case is rather peculiar, in that the patient was only four weeks old when brought to the hospital, and had already a well-marked patch of tinea circinata, strictly localised and circular, on the left cheek. The surface of the lesion was red and somewhat scaly, with some vesicles and a few pustules at the spreading edge. Abundant large-spored fungus was found in scrapings and in the root sheath of the hair, and on cultivation it gave a somewhat coarse growth of radiating aërial hyphæ of a dull whitish colour. A cat in the house, with which the child played, had a patch on the neck, from which the hairs had almost all come out, and on getting the mother to bring the animal to the hospital I found that the hairs over this patch were extensively affected with ectothrix fungus. Cultures showed a beautiful white growth of very coarse hyphæ, which grew much more rapidly than that from the lesion on the child, and was more downy in appearance. The medium on which the fungus from the cat was grown was of exactly the same composition as that used for the fungus from the child, but it had been freshly prepared, whereas the other had been kept a short time and had, perhaps, got a little dry. This may account for the greater luxuriance of the growth in the second culture.

The fifth case was also one in which the source of infection had been a cat. The patient, a youth, aged 16, had several well-marked patches of tinea circinata on the left arm and trunk, two of which were slightly vesicular at the edge, but the rest scaly. A large-spored trichophyton was found both within and without the hairs of the lesions, and on cultivation gave a somewhat coarse white growth very similar to what has already been described by other observers as being derived from the cat. From a patch on the patient's cat, which had been noticed to be "mangy," a very similar culture was obtained.

The next case was rather exceptionally interesting, in that the fungus which gave rise to the infection was an endothrix, and an endothrix is supposed to have an animal origin but seldom. Indeed, this species of fungus can only be inoculated into animals with difficulty, but it can be inoculated on the guinea-pig, the rabbit, and the cat, and this being so, there can be no reason why human beings should not become infected from animals. The patient in whom this infection occurred was a boy, aged 9, who came under observation for two more or less circinate, smooth, almost bald patches on the scalp, which had been present for more than a month. The hairs were said to have come out rapidly at first, and the patches were never markedly scaly. When seen, there were scattered over the affected areas some stumps of hair, dark in colour, projecting a few millimetres above the surface of the scalp, and swollen slightly at the far extremity. Within these hairs were chains of large spores running chiefly in the direction of the long axis of the hair, but no fungus could be found outside the hairs, which came away easily leaving the root sheath behind. The surface of these patches was so smooth that it was very difficult to scrape any of the superficial epithelium away, but in none of the *débris* thus removed

could any fungus be found. Cultures gave an irregularly plicated growth, somewhat powdery, and with a tendency to crack on the surface. Hairs from a cat in the house also contained an endothrix fungus, but the surface of these lesions on the cat was not smooth, and was covered with fine scales. Cultures from these lesions on the cat proved to be very similar to those obtained from the boy.

The last case was one of ringworm of the beard in a man aged 29. On the right side of the face were two small scabbed pustular lesions, over which the hairs were broken off within a short distance of the surface of the skin, and were fixed but loosely in the follicles. There was also a single red ringed patch with a pustular edge on the glabrous skin of the same side of the neck. When the hairs were pulled out, the root sheath often came away at the same time, and on microscopic examination this was found to be packed with chains of large glistening spores, and at the mouth of the follicle a collarette of mycelium was in some instances present. But also within the hairs there was some fungus present, though there was no apparent stripping up of the cuticle. Cultures gave a whitish downy growth with a central prominence, and a fine striated edge, but in many of the original tube inoculations the growths were contaminated by staphylococci, and it was only with difficulty that a pure culture was obtained.

The patient, who was a farm labourer, stated that one of the calves had ringworm, and brought me up some hairs from one of the patches. I did not see the lesions on the calf myself. These hairs also contained an ectothrix fungus, somewhat closely packed, so that the chain formation was not very evident. Cultures from these hairs also gave a white aërial growth with a striated edge.

These cases comprise, then, cases of ringworm in which the infection was derived from animals of various kinds, but I need hardly say that, in order to obtain even such a small number I have during the past three years been obliged to examine a considerable number of animals which had not ringworm, and to pay many fruitless visits to stables, mews, and other unsavoury spots. In some cases there was good reason to presume from the clinical and cultural appearances that the fungus had an animal origin, but I was unable to locate the animal. And this is not surprising, for the number of cases having such an origin must always be a very small percentage of the whole, and it must be remembered that one such case in a child is capable of serving as a source of infection to many more.

Valuable though microscopic examination is in enabling a diagnosis to be made, greater reliance must always be placed upon cultures, which either confirm the conclusions derived from the microscope or serve to differentiate those cases where otherwise a differential diagnosis could not be made. Such, for instance, are those cases where the spores are so closely packed that their shape necessarily appears round, and the microscope is quite unable to distinguish between microsporon and etothrix. Cultures, however, soon clear up the diagnosis. —*B.M.J.*

Physiological.

A little girl who attended a distribution of prizes given by the Society for the Prevention of Cruelty to Animals had won a book as a reward for writing the best essay on the given subject.

"Well, my dear," said the gentleman who had given away the prizes, "can you tell me why it is so cruel to dock horses' tails?"

"Because," answered the little girl, "what God has joined together, let no man put asunder."—*Norfolk Evening Standard.*

THE VETERINARY MEDICAL ASSOCIATION OF IRELAND.

The annual meeting, which had been postponed owing to the death of Queen Victoria, was held in the Gresham Hotel, Dublin, on Thursday, February 7th. Mr. M. Hedley, President, occupied the chair. Also present:—Messrs. C. Allen, J. Freeman, F. Kerr, P. J. Howard, F. C. Mason, J. D. Richardson, W. H. Wilkinson, G. B. Miller, J. A. Bole, W. J. Moran, A. J. Beckett, J. V. Daly, J. McKenny, J. H. Norris, H. G. Allen, J. J. Kelly, Principal A. E. Mettam, and Major Longhurst, an invited guest.

The PRESIDENT referred to the loss which the country had sustained by the death of Queen Victoria, and a resolution of condolence was unanimously adopted and ordered to be transmitted through the Hsme Office.

The following officers were elected:—President—Mr. Hedley (re-elected); Vice-presidents, Mr. Charles Allen, Principal Mettam, Mr. John Freeman, and Colonel Charles Steel: Treasurer, Mr. Charles Allen; Secretary, Mr. James McKenny; Council, Messrs. P. J. Howard, A. J. Beckett, R. B. Freeman, E. Wallis Hoare, F. C. Mason, F. Kerr, J. D. Richardson, J. V. Daly, and W. J. Moran.

It was decided that two medals should be presented to the Royal Veterinary College of Ireland for competition by its students, the design and superscription to be considered at a future meeting.

Principal METTAM read an exceedingly instructive and highly technical paper on "The Histology of the Blood," being the first of a series of papers which he intends to submit to the Society. A large number of specimens which had been specially prepared in connection with the paper, were exhibited under the microscope. (The paper will be printed next week.)

Several of the members took part in the discussion which followed the reading of the paper.

The meeting concluded with a vote of thanks to Principal Mettam for the trouble he had taken.

JAS. MCKENNY, *Hon. Sec.*

THE SANITARY INSTITUTE.

The "Journal of the Sanitary Institute" which has just been issued contains a long article by Professor A. Celli of Rome on "Researches on the Propagation of Malaria and the precautions to be adopted in Unhealthy Districts. After describing some of the opinions of other investigators he gives reasons for deciding that the dappled-winged gnat known as Anopheles is the propagating agent. He then describes the life history of the insect, and sets out a series of, corollaries for the Hydraulic Engineer, for the Sanitary Engineer, and for the Agriculturist, in which are detailed the steps that can be taken to prevent the multiplication of the anopheles, and other measures against the spread of the disease. The concluding portion of the paper gives instructions for the self-protection of labourers in malarious places. The paper is illustrated from some of Professor Celli's photographs showing methods of protecting houses and shelters.

The same journal contains papers of Dr. Tidswell, Medical Officer of Health, Sydney, N.S.W., and Dr. Kaka, Medical Officer of Health, Karachi, India, on their personal experiences of the plague in Sydney and Karachi, with descriptions of the preventive measures adopted. Some microscopic photographs of the plague bacilli and dissections of plague-infected rats and guinea-pigs, appear in the paper.

"Journal of the Sanitary Institute," Volume XXI, Part IV. E. Stanford, Long Acre, 2s. 6d.

MEAT CASE AT LOCKERBIE.

John Wyllie. cow dealer, Fishbeck, Lockerbie, was charged with being the person to whom belonged four quarters of diseased cow beef intended for human food, and which were seized in the Edinburgh Slaughterhouse on the 3rd ult. Accused pleaded not guilty.

The evidence of the veterinary surgeons and market inspectors under the Act was to the effect that the beef when seized was dark in colour, and seemed to be that of a beast which, when slaughtered, was in a high fever. One of these witnesses admitted that two days in transit to Edinburgh would certainly, considering that the weather at the time was mild and moist, affect the meat. Another, however, stated that in his opinion the beef was undoubtedly that of a diseased animal. What the disease was, not having seen the viscera, he could not say. The meat had been sent to the Central Meat Market, Edinburgh, and had been refused there. Dr. Williamson, chief sanitary inspector, would not admit that the meat might have been affected by the weather. Its condition at least would not have been that in which it was when seized.

For the defence a Kircudbright veterinary surgeon said he saw the carcase after the animal had been slaughtered. Apart from slight congestion of the lung there had apparently been nothing wrong with the cow.

Accused deponed that the cow, which he had only a few days, and had bought with a warranty, being slightly unwell, he had asked his son to give it a dose of treacle. In the administering of this a quantity went into the lungs instead of the stomach and the cow, which showed signs of choking, was, upon the advice of a veterinary surgeon, slaughtered. Respondent's son corroborated, and the butcher who killed the animal likewise spoke to its being, so far as he could see, quite healthy.

Mr. James Lindsay, veterinary surgeon, Dumfries, said on the 29th of November he was called in by Mr. Wyllie to see the cow. He found it displaying those symptoms of illness he would have expected to see if, as he had been told was the case, some treacle had, while being given to the animal, found its way into the trachea and bronchi. He advised that the cow should be slaughtered, and afterwards examined the carcase very minutely. There was no sign of disease. In the bronchi he found a quantity of treacle and water, and there were evidences of slight congestion of the lungs. The meat was perfectly sound and in good condition. He would have had no hesitation in partaking of it. Its condition when it arrived in Edinburgh would, considering the state of the weather, be quite easily accounted for by the time occupied in transit.

After hearing the Procurator-Fiscal, Mr. Macaulay Smith, and the agent for the defence, Mr. Munro, S.S.C., the Sheriff, in giving judgment, said what was to his mind the most important question in the case was whether the respondent did not know, and could not with reasonable care have known, the condition of the carcase, and upon that he proposed to decide the case. He thought it was established, and undoubtedly established, that the meat, when seized, was not in a satisfactory condition ; that it was unsound and unfit for the food of man. On that point the veterinary inspectors were all agreed. But that did not touch the question whether the respondent did know, and with reasonable care could have known, that such was the case.

His Lordship held that Mr. Wyllie had done all that could be reasonably expected of him, and that he had proved he did not know, and could not with reasonable care have known, the condition of the meat, and that he was therefore, not liable to the penalty libelled.

"Docking."

William Lamond, a coachman, and William Chalk, a fishmonger, both of Red Post Lane, East Ham, were summoned for cruelly illtreating a horse by "docking" it.—Mr. Colam, who prosecuted for the Royal Society for the Prevention of Cruelty to Animals, said that Chalk was the owner of the horse, and at his instance the animal had been "docked" by Lamond. The docking was performed by an ordinary butcher's knife, and the injured part of the tail was merely tied up with a piece of string. The horse subsequently died from tetanus.—Mr. Fred. George, for Chalk, said that Lamond performed the operation without any instructions from Chalk. The latter had spoken to a 'bus driver as to the advisability of having the horse docked, and after that the 'bus driver took Lamond to the stable and docked the horse. – Professor Pritchard, of the Royal College of Veterinary Surgeons, said that "docking" if performed at all should be done by a skilful man, and he added that he did not agree with the operation at all.—Mr. Burnett Tabrum (the chairman) : I am very glad to hear you say so.—Mr. Leigh, another veterinary surgeon, who was called in to attend the horse, said he found that the bone had been left bare.—The Bench fined each of the defendants 40s. and £1 7s. costs.—*Morning Advertiser.*

Cruelty to a Dog.

Henry Jennings, chemist and druggist, Hockley Hill, Birmingham, was summoned at the City Police Court, Birmingham, on February 6, for cruelty to a collie dog. The dog belonged to a Mrs. Gates, who took it to the defendant to have it destroyed. The defendant advertised in the newspapers "Dogs destroyed instantly ; 1s each," and Mrs. Gates thought it would be poisoned, but, instead, the defendant led it into the yard and shot at it with a revolver. The dog yelled and ran away, and when brought back afterwards was found to have been shot in the head above the left ear. Defendant's counsel urged that his client was a humane man, but unfortunately the revolver twice missed fire, and when at the third attempt the weapon went off the bullet did not go direct. Mr. Jennings himself stated that he had shot five or six dogs and some cats with revolvers. He had poisoned hundreds, but lately had observed that prussic acid was not always to be depended upon, as it caused terrible convulsions. He had no intention of causing the dog pain. The Magistrates were of opinion that shooting would be less painful than prussic acid, but in the present case the revolver was not properly used. They did not think there was intentional cruelty and dismissed the summons.—*The Chemist & Druggist.*

Personal.

PLANT—STEVENSON.—February 6th, at St. Lawrence's Church, Over Peover, by the Rev. F. A. Holland, M.A., Elvin Plant, M.R.C.V.S., of Middlewich, to Mary Eleanor, daughter of Mr. T. Stevenson, Meadow Bank, Over Peover.

ARMY VETERINARY DEPARTMENT.

Veterinary Surgeon F. F. G. White was discharged from hospital to duty, week ending Feb. 3.

5th M.I.—C.V.S. John Henry Bell, slightly wounded, gunshot wound, thigh, Tabaksberg, Jan. 20.

Vet.-Lt. S. Stockman, Rhodesian Field Force Artillery, was discharged to duty week ended Jan. 20.

If our phenomenal losses in horseflesh are not to be continued in the future, there must be not only skill and prudence in selecting the raw material, but the Army Veterinary Department must be put in a position to carry out its duties with the greatest advantage to the mounted services. This has not hitherto been the case, as has already been pointed out in these columns, and in the Military Press generally. It is not a little disquieting to find, as time goes on, that no steps are taken to remedy known and proved evils. When the war commenced a large number of civilian veterinary practitioners, ignorant of army duties, were engaged to supplement a department which had neither strength nor expansion. But instead of matters improving, instead of our being now in possession of a Veterinary Department capable of dealing with an emergent occasion, it is found impossible to fill ordinary vacancies. Take, for instance, the treatment received by the veterinary officers with regard to their titles. It is such as no fair-minded man can approve of. These officers desired to have the distinguishing prefix, *Veterinary*, abolished as an official designation. And why? Simply because a distinguishing prefix was non-existent in any other army department. They thought they might be styled captains and majors, pure and simple, with fully as good a right as the doctors, who, having been allowed to drop the prefix of surgeon, flourished and operated as captains and majors. The matter having long ago been brought to notice through the proper channel, and without agitation, an answer was received that it was "under consideration." As the grass is growing the steed is starving. The consideration goes on so long that the best veterinary students will not apply for army commissions. Is this business?—*Illustrated Sporting and Dramatic News.*

CORRESPONDENCE.

VETERINARY ASSISTANTS AND OTHERS.

Sir,

As an editor (departmental) I have often been led to weigh the relative advantages and disadvantages of the system of anonymity so universal on this side of the Channel, and compare it with the almost equally universal custom in France and other countries of publishing signed articles on any and every subject.

It is really very interesting to note the difference in the way a letter or article is received when bearing the signature of an authority, or the imprimatur of an editor, and when some *nom de plume* is employed. Over my own signature I seldom evoke a reply, but only let me sign myself "Veteran" or "Old Obadiah," and the spleen of some recent graduate is stirred. It is well: we must all wish to see plenty of the fighting spirit in our young men so long as they are not blinded with fury and rush into pitfalls like those in which your correspondents J. H. S. and G. Mayall are about equally bogged. On each occasion that I have ventured a letter on the subject of assistants (I will accommodate Mr. Mayall by withdrawing the "veterinary" as regards unqualified ones) some junior has set up an imaginary old fogey and then pelted him with mud; as if by such means youth might be made less "cocky" and age more tolerant? Your correspondents forget that while every old man has been young no young man can have been old, and that experience of both conditions should afford the older man a larger view of things.

Personally, I am not the least averse to any slanging your correspondents indulge in, but I regret their style of attack—and for their own sake alone. It can never give a man power of debate, either *viva voce* or in a newspaper controversy, if he first assumes that his opponent is a tap-room hero and given to low associations, and the abuse of family life by the discussion of professional topics at the dinner table. The "swelled head" and the "favourite pub." to be visited "twenty times a day" is in such very bad taste, that I quite hope J. H. S. will see it when courteously pointed out.

VETERAN.

P.S.—In answer to your correspondent's question as to "how much I have acquired since I was a King Street Harrier," it may interest him to know that among my acquisitions are the diplomas of two other professions, election to the Incorporated Society of Authors, and a Commission from Queen Victoria of Blessed Memory.

FELLOWSHIP EXAMINATION.

Sir,

Living in a remote spot and far from the "madding crowd" I have little opportunity of learning some of the things I should like. Now, like many mortals, ambition which I am anxious to vault fires my blood and spurs me onwards, but lest I should fall on the other side discretion prompts me to inquire, therefore I shall be more than obliged if any of your readers will be kind enough to afford me any information concerning the questions set at the above exam. The percentage of passes is fairly high, judging from the result of the last exam., this gives me hope, although my spirits have been cast down by some descriptions of the awful ordeal. The conflicting stories regarding the test have been the cause of my troubling you to ascertain some truth on the matter. I am not one who runs down the degree because I don't possess it—all merit to those gentlemen who have had the pluck to go in for it.—Yours truly,

W. B. G.

SKIN DISEASES.

Sir,

I read with interest Mr. Wolstenholme's account of a case of skin disease in your issue of February 2nd. I had a somewhat similar case a short time ago and diagnosed it as caused by derangement of the digestive apparatus—broad but safe.

My treatment consisted of the bicarbonate of soda and nux vomica internally, with a dry dressing externally, composed of equal parts oxide of zinc and carbon, the skin having been previously washed well just once with hot water and carbolized compound, afterwards dried thoroughly. The diet consisted of bran, carrots, linseed cake, and good meadow hay, with a limited quantity of chilled water to which occasionally a little potassium nitrate was added. Cleanliness of loose-box was observed and a daily disinfection carried out with hot water and Augean fluid. In about one month the case yielded to treatment.—I am, yours etc.,

CHAS. A. SQUAIR, M.R.C.V.S.

Reigate, Feb. 2.

COMMUNICATIONS, BOOKS, AND PAPERS RECEIVED:—Messrs. C. A. Squair, W. H. Williamson, E. Plant, R. W. Knowles, J. B. Wolstenholme, W. Shipley, F. E. Place, "Vetern," W. B. G. "Citzen," "Fairplay," "Justice."

Journal of Comparative Medicine and Veterinary Archives (Philadelphia) Dec. *Archives de Stomatologie et Journal de l'Anœsthésie, The Belfast Health Journal, The Liverpool Mercury.*

Original articles and reports should be written on one side only of the paper and authenticated by the names and addresses of the writers, not necessarily for publication.

Communications for the Editor to be addressed 20 Fulham Road, S.W.